Jean-Marie Dufour
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ECONOMETRIC THEORY
EXERCISES 8

Confidence sets

References: Dufour (2003), Gouriéroux and Monfort (1995, Chapter 15).

1. Discuss the relationship between hypothesis tests and confidence sets. In particular, the following points should be covered:
   (a) How can a confidence set be derived from a family of tests ?
   (b) How can a test be derived from a confidence set ?
   (c) If a confidence set for a parameter θ is derived from a family of tests with level α, what is the level of this confidence set ? Justify your answer.

References

DUFOUR, J.-M. (2003): "Identification, Weak Instruments and Statistical Inference in Econometrics," *Canadian Journal of Economics*, 36(4), 767–808.

GOURIÉROUX, C., AND A. MONFORT (1995): *Statistics and Econometric Models, Volumes One and Two*. Cambridge University Press, Cambridge, U.K., Translated by Quang Vuong.